ON THE

ABSOLUTE NECESSITY

OF

ENCOURAGING,

INSTEAD OF

PREVENTING OR EMBARRASSING

THE

STUDY OF ANATOMY;

WITH A PLAN

TO PREVENT

Violating the Dormitories of the Defunct.

ADDRESSED TO THE

LEGISLATURE OF GREAT BRITAIN.

BY

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London:

Printed in the Year 1795.

I

Rowley

ON THE

ABSOLUTE NECESSITY

OF ENCOURAGING

THE STUDY OF ANATOMY.

WHEN prejudices and errors are likely to operate againſt mankind in general, it becomes the indiſpenſable duty of every man, capable of giving uſeful information, to freely deliver his ſentiments. Whatever is likely to obſtruct the progreſs of medical ſcience, deſerves the ſerious attention of every practitioner in medicine. Anatomy is allowed by every learned man in the profeſſion, to be the moſt uſeful and certain of any the ſurgeon or phyſician ſtudies; it reduces to actual demonſtration, what was formerly obſcure and ambiguous; it teaches the doctrines and uſes of all the parts of the human body, ſecures to the ſurgeon a confidence in all operations, and to the phyſician the power of diſtinguiſhing diſeaſes, with all their varieties, cauſes, and probable conſequences.

The legiſlature of Great Britain, and the public in general, therefore, ſhould be informed of the neceſſity of encouraging, inſtead of impeding anatomical ſtudies.*

* It may be ſolemnly aſſerted, that anatomical ſcrutiny is carried on, in general, with the greateſt decorum and circumſpection; the ſcrutiniſed parts of the defunct are generally buried, unleſs preſerved for ſkeletons or other demonſtrative purpoſes. What ſurgeon would be ſkilfully able to reduce fractures or diſlocations without an accurate knowledge of the bones, joints, muſcles, ligaments, &c.? How could fractures of the ſkull be treated without a knowledge of the bones of the head, their ſutures, &c.? How could the wounded ſoldier or ſailor have balls, or extraneous bodies extracted, or the lacerated wounds of the latter be treated judiciouſly, if ſurgeons did not previouſly know and reflect on the courſe of the large veſſels, nerves, muſcles, tendons, &c. in the neceſſary dilatations of gun-ſhot wounds, and all operations? Is the brave ſoldier or ſailor, after the well-fought battle, to be left a ſacrifice to the ignorance of uninformed ſurgeons, or rather pretenders to ſurgery? There have lately been poured forth lamentable complaints on this ſubject; and to what can this be attributed, but the true cauſe, the want of due encouragement and opportunities of becoming expert anatomiſts and practical ſurgeons, before young artiſts are ſent into the ſervice? One of the greateſt objections to the medical education at Edinburgh, where are many ingenious profeſſors, is, the want of ſubjects for anatomical diſſection, without which, no perſon, however ingenious and learned in other reſpects, can be a ſkilful practical ſurgeon or phyſician. Indeed, to ſpeak truth, univerſities are not the beſt places for acquiring medical knowledge; but large cities, where the obſervations of numbers of practitioners concentrate, and, as it were, form one uſeful whole, that adds to our daily ſtock of knowledge. For anatomy clears up doubts, purges the mind from all viſionary or fanciful prejudices, penetrates and diſcovers the fallacy of various hypotheſes and injurious ſyſtems. With that knowledge the art of phyſic is a bleſſing, without it a peſt or curſe to mankind.

On the general Utility of Anatomy.

No medical or chirurgical author can be underſtood without a previous acquaintance with anatomy. Surgery, that ineſtimable art, on the ſkilful adminiſtration of which, the lives of all ranks, from the higheſt to the loweſt, the ſoldier and the ſailor, frequently depend, would be totally incapable of performing its ſalutary functions without the ſafe guide of anatomical ſcience. From the common operation of bleeding, to the higher and more difficult operations of ſurgery, the knowledge of anatomy guides the hand of the artiſt, to avoid fatal errors, and enſure probable ſucceſs. In thoſe moments of alarm and danger attendant on childbirth, where frequently both infant and mother muſt periſh in difficult labour, a ſkilful artiſt, fraught with previous anatomical knowledge and reflection, frequently ſaves the lives of both. An ignorance in anatomy, therefore, muſt produce ignorance in the practice of ſurgery, midwifery, and phyſic; an ignorance in theſe may prove fatally deſtructive to every individual at one time of life or other; for who can with truth declare, while men are liable to ſickneſs, accidents, or wounds in war, that he ſhall be exempted from requiring medical aſſiſtance? The human ſacrifices to ignorance in anatomy muſt have been innumerable in former ages, and if anatomical purſuits be, by law, prevented or abridged, barbarous ignorance muſt again return, and all mankind ſuffer from the officious, though well-intentioned projects of the uninformed few.

A knowledge of anatomy cannot be acquired by reading books, by ſtudying impreſſions from copper plates, by hearing lectures, nor by viewing anatomical preparations. A ſuperficial acquaintance of the parts of the human body may be obtained by theſe means conjointly; but ſuperficial knowledge is by no means ſufficient for medical ſcience, and much leſs for the operations of ſurgery. No; the ſtudent who would wiſh to diſcharge his duties with a conſcientious rectitude, muſt repeatedly, with his own hands, diſſect dead human bodies; muſt breathe for many months in the unpleaſant, and frequently deſtructive air of a diſſecting room; he muſt riſk his own life to be ſerviceable to others; and frequently ſome of the brighteſt ornaments of the profeſſion have fallen victims to their ardour in theſe neceſſary, though horridly diſagreeable purſuits*. Nothing but a laudable ambition for excellence; nothing but a determined reſolution to brave all dangers; nothing but an abhorrence of ignorance, could induce men to ſit up whole days and nights in purſuit of thoſe reſearches, of which, all the world, except them-

* In theſe purſuits, a ſlight ſcratch on the finger of the diſſector has abſorbed putridity ſufficient to rapidly prove fatal. *Magnus Falconar*, who diſſected at my houſe, when I taught anatomy and ſurgery, above twenty years ago, uſed to ſit up whole weeks in purſuit of his favourite object, anatomy. He died very early in life, after arriving at an uncommon degree of excellence. The ingenious Mr. Hewſon, Dr. Walſh, a promiſing young phyſician, Dr. Peckwell, and many others, have ſhared the ſame fate.

 ſelves,

ſelves, frequently reap the benefit. The inqueſts for murder or accidental deaths; the trials of criminals, in many caſes, require preciſe anatomical knowledge, or the guilty might often eſcape and the innocent ſuffer.

What impedes the Progreſs of Anatomy.

The principal impediment to anatomical ſtudies, is the difficulty of obtaining dead human bodies to diſſect. There is no power in the medical profeſſion of England, as in other countries, to inſiſt on the inſpection, after death, of thoſe extraordinary caſes of diſeaſes that occur in practice, which might be the moſt eligible means of preſerving the health, and ſaving the lives of the living. In this country, narrow prejudices muſt be baniſhed, liberality and ſcience embraced, the people mildly informed of how much conſequence it is to themſelves and poſterity, to ſuffer anatomical inveſtigations to be more frequently practiſed, that thoſe who live may benefit by the dead.* The preſent improved ſtate of ſurgery, the moſt ſatisfactory principles for the practice of phyſic, the moſt indubitable concluſions from inductive reaſoning, all originate in anatomy. Anatomy exhibits facts after death; juſt reaſoning diſcovers the cauſes as they happened in life; paſt

* I have, during my whole life of medical ſtudy, ſeized all opportunities to obtain anatomical facts; from being convinced, after long experience and reflection, that it is the moſt rational and decided mode of obtaining an accurate knowledge of diſeaſes and their effects.

experience on the powers and effects of medicine in various diſeaſes, united with the former *data*, determines the *quid eſt agendum*, in every difficult caſe of diſeaſe.

The attainment, therefore, of all this uſeful knowledge forms the able phyſician; but if anatomy had never been cultivated, if that demonſtrative art had not been protected by royal authority, and well-regulated governments, excellent phyſicians, or ſurgeons, never could have appeared; the different branches of the art would have remained in their former miſerable ſtate, and mankind, labouring under the moſt ſerious diſeaſes, left a prey to ignorance, artifice, and impoſture. Can any human being, after a knowledge of this true ſtate of facts, wiſh to obſtruct the progreſs of a ſcience, in which the welfare of all ſociety is ſo materially concerned, ſo importantly intereſted? *

The

* A paſſage from the *Rational and Improved State of Phyſic*, I lately publiſhed in four volumes, containing the cauſes and cure of nervous bilious diſeaſes, with many other intereſting ſubjects of medicine, ſurgery, &c. will ſhew the preſent writer's opinions on the art of medicine.

"As the modes of reaſoning adopted by the author, in many parts of theſe works, may appear new, particularly to thoſe who are not accuſtomed to reaſon logically, it may be neceſſary to give a ſhort explanation of the manner in which the reaſonings are conducted.

"Mathematical, geometrical, mechanical, and many chemical hypotheſes, formerly and lately in vogue for conſtructing the various and viſionary theories in medicine, in a great meaſure, are excluded, and facts, originating from the evidence of the ſenſes, from ocular demonſtrations, are exhibited to explain the *cauſes*

of

The laws puniſh ignorance in medicine and ſurgery; the ignorant pretender is hindered from prac-

of diſeaſes, and to ſearch for adequate remedies to remove thoſe cauſes.

Firſt. The anatomical ſtructure and phyſiology of the parts or functions, are explained in different treatiſes, by connected facts and reaſonings, as far as were thought expedient.

Secondly. From the appearances after death, the impediments and morbid affections, that had happened in life, are attempted to be aſcertained by inductive reaſonings.

Thirdly. Propoſitions from theſe ſources of true intelligence are formed, in many inſtances, both theoretical and practical.

Fourthly. From conſidering the origin and magnitude of diſeaſes, explained by the foregoing means, their ſtages, real and probable effects in the living human body, are all the prognoſtics diſcovered, and what benefits may be expected from the art of medicine in various diſeaſes; by which facts and reflections, rational expectations are encouraged, and raſh boaſtings and irrational promiſes diſcountenanced; medicine, thus conceived, and practiſed, ſtrictly adheres to reaſon and truth.

Fifthly. By concentrating all the foregoing facts, and conſidering, from long and paſt experience, the force, power, and probable conſequences of a diſeaſe, with its ſtages, whether it be chronic or acute, the age, ſex, ſtrength, and conſtitution of the individual affected, are aſcertained the powers and mode neceſſary for the removal of the *cauſes* of diſeaſe.

Sixthly. In the election of remedies, thoſe that are important are adopted and preſcribed, where they can be exhibited with ſafety and rationality to the patient, and *palliative* methods of treatment are never propoſed, but in caſes wherein *radical cures* cannot be with any hope of ſucceſs attempted.

" Amongſt the great variety of preſcriptions for the *robuſt* and *florid*, *pale* and *debilitated*, *irritable* or more *torpid*, &c. there are few which the author's own experience has not proved ſafe and efficacious in the caſes, and under the circumſtances they are re-

practiſing the art without undergoing an examination. The Legiſlature has provided penal laws againſt ignorance in the medical profeſſion; will it be conſiſtent with wiſdom and humanity to prevent the ſtudent from becoming learned, and then puniſh him for involuntary ignorance? Every mode, which can obſtruct anatomical ſtudy, muſt induce the groſſeſt ignorance; every invention, which can excite an ardor in ſtudents to become excellent anatomiſts, will be the only means of producing ſkilful ſurgeons; the abſence of which lately in our armies, though it be a delicate ſubject to mention, has been owing to the want of dead human bodies to diſſect, and for performing the various operations of ſurgery, previous to practice on the living ſubject. Whoever does not comprehend the exact courſe of the veſſels, nerves, the directions of muſcular fibres, and, in ſhort, anatomy, and who has not practiſed on dead ſubjects, ſo as to well comprehend the reſiſtance of

commended.* It has always been conſidered the duty of a phyſician, to act on clear principles and with energy, or not act, and be always more ſolicitous to attack a diſeaſe by efficacious remedies, than to pleaſe the patient's taſte at the hazard of life, or the injury of the conſtitution. The ordering trifling ſaline and ſweetened draughts, when diſorders demand the moſt decided and powerful practice, is a diſgrace to the art; *ſed eſt modus in rebus.*"

* *There is certainly a great difference in the conſtitutions of different patients, ſome abound with* ſerum, *others with a ſuperabundance of* red particles *in the blood, which form the* pallid *and* florid; *the fat ſuperabound with oil, the lean not. Will any confined ſyſtem be adequate to this diverſity?*

parts to the different chirurgical inſtruments neceſſary in operating, with all the *minutiæ*, and accidents common to different operations, will be a timid, raſh, or ignorant practitioner, and miſerable muſt be the lot of thoſe who become patients to ſuch an inexperienced, untaught novice. The foundation of all the requiſites for ſucceſsful practice is chiefly in anatomy; the judicious application of which, in human life, is only found in large hoſpitals, and acquired by practical obſervations. In the extenſiveneſs of theſe fields of ſcience, the French are quite ſuperior to us; their hoſpitals give a latitude for anatomical inveſtigation far above all the countries in Europe.*

* *Louis* the Fourteenth was the grand protector and encourager of the uſeful arts, and he left monuments of medical learning that render his name immortal. Engaged in wars, this monarch ſoon found, that *ſkilful ſurgeons* were very uſeful to the ſtate, and accordingly erected public academies, and gave liberal immunities and privileges for the attainment of that and other branches of medical ſcience, which his anceſtors, and all other princes, had ſhamefully neglected. There is no public eſtabliſhment in this country for anatomy; but the ſooner one is eſtabliſhed, and the ſooner means are deviſed, for obtaining a ſufficient number of dead bodies for diſſection, ſo much the ſooner will the *army*, *navy*, and the whole country, be furniſhed with excellent ſurgeons, whoſe united labours will daily improve the art, and pour down bleſſings on ſociety.

How

How to remove the difficulties, which at preſent exiſt, in acquiring anatomical knowledge.

The removal of the difficulties, which oppoſe or impede anatomical ſcience, is eaſier to be conceived than practically executed.

Firſt. Mankind in general ſhould be convinced of the neceſſity and utility of practical anatomy, as it is univerſally beneficial.

Secondly. Thoſe ſuperſtitious fears and prejudices, that have excited horror and oppoſition to the admiſſion of opening dead bodies, for the benefit of the living, ſhould be chaced away by the lights of ſound reaſon and truth.*

* It is a curious inveſtigation for philoſophic minds to reflect on the various opinions of various ages and countries concerning the bodies of the dead; the Egyptians preſerved the bodies of their anceſtors, after having them prepared as mummies, and decorated with gilding, varniſhing, and painted on their coverings the myſtical hieroglyphical figures of their deities, &c. The Greeks, Romans, and other nations, burnt their dead; the Engliſh in London often bury their poor, twenty or thirty together, in a vault opening with two folding doors, uncovered even by earth, to the no ſmall annoyance of the neighbourhoods contiguous to church yards. This practice calls aloud for the interference of the legiſlature; for it has been lately proved, that an halitus, or air ariſing from the putrefaction of dead bodies thus corrupted in numbers, is the moſt deleterious of any known by pneumatical experiments. The notions about dead bodies are certainly capricious, as clearly appears by the different opinions of different ages; it muſt be confeſſed, that neither the laws nor the dormitories of the defunct ſhould be violated; nor would ſuch violation ever be practiſed, were rational plans adopted to prevent the commiſſion of theſe crimes.

Thirdly. All condemned criminals, after execution, ſhould be delivered to an academy of anatomy, for the ſole purpoſe of inſtructing ſtudents.

Fourthly. The phyſicians and ſurgeons of public charities ſhould have an unlimited power to inſpect dead bodies, and be obliged to publiſh their obſervations, or tranſmit the ſame to the academy of anatomy. Public expence ſhould be converted into public benefit.

Fifthly. It is not uncommon for perſons of rank to have their neareſt relations and friends opened to inſpect the cauſes of death, and to aſcertain, whether in life, more might have been done in the attempts to cure, as likewiſe for the purpoſe of embalming the body. If ſuch rational inquiries, and the practice of embalming, were more univerſal, they would tend greatly to promote the future welfare of ſociety. Such examples would be more generally followed, if they became more frequent; and the horrors expreſſed by the ignorant, or timid, would daily diminiſh.

Sixthly. The academy of anatomy ſhould be defrayed at the public coſt, in which caſe the ſtudents ſhould be exempt from all expence; if not, the emoluments ariſing from pupils ſhould be appropriated to that purpoſe.

Seventhly. As it has been found, by long experience, that corporate bodies form individual cabals, and often deſtroy the laudable intentions of their original inſtitutions, by purſuing private intereſt, inſtead of public benefit; the plan for conducting the

the academy of anatomy ſhould be ſo cautiouſly arranged, as not to ſuffer the ſelf-intereſted to overturn the wiſe intentions of the learned ſeminary.

Eighthly. There ſhould be ſome honourable encouragement to every pupil, who diſtinguiſhed himſelf by either induſtry, or by making any new diſcovery or valuable improvement, whether in anatomy or practical ſurgery; for true genius, and the moſt ſuperlative talents, are often allied to neceſſitous want. A ſpirit of emulation would thus incite the parties to labour, and additions to the preſent ſtock of knowledge would be the reſult of inquiries, when thus conducted by a ſpirit of philoſophical reſearch, candour, and liberality.

Ninthly. Every pupil, who dedicates his talents to ſurgery, after having obtained a ſufficient knowledge in anatomy by diſſecting, ſhould perform, in the preſence of reſpectable ſurgeons, all the operations of ſurgery on the dead body; thus would the fleets and armies be ſupplied with able ſurgeons, when every practitioner would be forced to diſplay his knowledge and abilities, before he entered into the ſervice, or practiſed the art.

Tenthly. Phyſicians ſhould not only be obliged to diſſect and perform the operations, &c. but ſhould be compelled to know theoretical and practical midwifery, and give poſitive proofs of their knowledge in phyſiology, &c. It is but juſt, that thoſe who reſide at the head of a profeſſion, ſhould be ſuperior to all thoſe who only practiſe a particular branch of the art.

Thus

Thus it has been fully proved of what conſequence the ſcience of anatomy is to the practice of phyſic, ſurgery, and midwifery, to individuals, and to the community of every rank. The impediments to its cultivation, and ſome general modes of removing them, have been intimated, and it is hoped that the Legiſlature, and mankind in general, will attentively and ſeriouſly conſider, and weigh the important truths advanced. Princes and governments cannot ſhew a more affectionate concern for the welfare of the people than by the encouragement of every branch of knowledge that can alleviate the miſery of diſeaſe; nor can there be conceived a more wanton barbarity than to check the progreſs, or fruſtrate the humane offices of this ſalutary ſcience.

Theſe obſervations have not originated in viſionary hypotheſis, nor chimerical conceits, the offspring of unbridled fancy and inexperience; but from a ſincere love of truth, a regard for the honour of the medical profeſſion, and from nearly forty years continued ſtudy and practice in the healing art. The reflections are not intended to vindicate, but to prevent or aboliſh the modes of procuring ſubjects for anatomical inveſtigation, which ſhock the feelings of humanity; to apprize the Legiſlature, and ſociety at large, of the indiſpenſable neceſſity of enlarging, inſtead of reſtraining anatomical ſtudies, and to ſhew the moſt eligible mode by which that important object is attainable. Other means might be, likewiſe, deviſed, and if any future opportunity ſhould occur, in which a more

a more elaborate conſideration of the ſubject may be neceſſary, than appears in the preſent haſty publication; no labour ſhall be ſpared to render the moſt ſenſible ſuggeſtions permanent; nor ſhall any thing be omitted, that is likely to prove beneficial to the profeſſion, or to the advantage of ſociety in general. An impulſe above private intereſt, narrow cenſures, or the ſuperficial opinions of thoſe who carry through life the infantile impreſſions of the nurſery, has given riſe to theſe animadverſions. It would have been criminal to have withheld uſeful intelligence on a ſubject in which the whole world is intereſted, and, in particular, the honour and wiſdom of the legiſlature of Great Britain. The extenſive confidence amongſt all ranks, the author hath enjoyed, as a medical practitioner, for a long period, demands this tribute of gratitude to the nation, whatever may be the conſequence. The whole ſtudy of medicine requires regeneration to render it more uſeful to ſociety; the univerſities, in particular, require renovation in moſt departments of ſcience; the paths to all human knowledge might be abridged and rendered eaſy of acceſs, were ancient prejudices aboliſhed, and modern diſcoveries and improvements univerſally adopted.*

It

* Perceiving, early in life, great defects in medical education, it occurred to me that the modes were highly improveable, and that the road to ſcience could be rendered much more eaſy of acceſs. Above twenty-four years ago I formed a plan, and have, as much as my other avocations and temporary practical writings would

It was ſincerely hoped that ſome profeſſional anatomiſts would have favoured the world with their

would permit, laboured inceſſantly to accompliſh this great object. Two volumes in quarto, written in Latin, that its benefits may be more univerſal, are now ready for publication: in the anatomical part of which are above 60 copper plates, with references, on an entire new plan, to facilitate the ſtudy of anatomy, &c. This work, which has been executed at an immenſe expenſe for a private individual, who has no other fortune than his profeſſion, it is hoped will, in ſome meaſure, diminiſh the neceſſity of procuring ſo many bodies for diſſection; but yet, it is a certain fact, confirmed by experience, that real diſſections are abſolutely neceſſary; for a pupil will comprehend and retain more by his own practical inſpection of even one or two bodies, than by attending lectures, or reading for years. Diſſection leaves an impreſſion in the mind never to be effaced, and the plan of the books mentioned, has been, as nearly as poſſible, formed to refer to on all occaſions, to remember what has been practically taught in the diſſecting room. The general rules delivered for diſſection in theſe works are as follows, by which the learned will perceive, that cleanlineſs and decency are its prominent features, not wanton barbarity, as perſons unacquainted with its rules may ſuggeſt.

De generalibus quibuſdam præceptis in diſſectionibus tenendis.

1. Ad diſſectiones nemo, niſi qui medicinæ aut chirurgiæ ſe dicavit, admittatur.

2. Tempus adminiſtrationibus anatomicis eligatur hymens.

3. Cadaver autem primo ab omni impuritate mundandum eſt.

4. Locus adminiſtrationis frigidus ſit.

5. Locus, in quo peragitur ſectio luminoſus ſit.

6. Cadaver menſæ verſatili imponatur; ut menſa circumacta, omnibus omnia oſtendi queant.

7. Manus in operando ſuſpenſa teneatur.

8. Humiditates ſpongia ſæpius exſorbeantur.

9. Tandem finito labore diurno, cadaver ſtudioſe contegendum.

Schola Medicinæ Univerſalis Nova, p. 2.

ſenti-

ſentiments on the preſent important occaſion; their experience and intereſts in the promotion of the ſcience they teach, might have added great weight to the arguments here preſented. Of all the teachers who deſerve the commendation of ſociety in the medical art, the profeſſors of anatomy certainly ſhould hold the higheſt rank; long may their labours continue to ſerve mankind. As theſe learned gentlemen have not appeared publicly on the preſent momentous buſineſs, perhaps from motives of delicacy, a man who has no private views or perſonal intereſts to anſwer, ſteps forth a volunteer to defend the honour of the medical profeſſion, and to ultimately promote the cauſe of reaſon and humanity.

Saville Row,
15th April, 1795.

FINIS.